REMARKS

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1, 2 and 6-11 have been cancelled. Claims 3-5 remain pending. Claims 12-14 have been added.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5). The reference number "(S22)" has been added after the last part ("device 4 in the server computer 6.") of line 1 on page 11 of the original specification. Judging from the fact that S21 and S23 are properly indicated, it is clear that this is just a simple error. S21 is indicated both in Figure 2 and in line 23 on page 10 of the specification and S32 is indicated both in Figure 2 and in line 6 on page 11 of the specification. Accordingly, this objection should be withdrawn.

Because there are numerous changes to the specification, a Substitute Specification, together with a marked-up version, is hereby submitted. No new matter has been added.

Claims 1-11 were rejected under 35 U.S.C. § 101 as being generally narrative and indefinite. In response, the claims have been amended to recite a computer-readable recording medium to comply with 35 U.S.C. § 101. Accordingly, this rejection should be withdrawn.

Please amend the title of the invention to "A COMPUTER-READABLE RECORDING MEDIUM IN WHICH BASIC-ADMINISTRATIVE-TASKS SOFTWARE PROGRAMS ARE RECORDED" in order to clarify that this invention is to be included in a category related to a computer-readable recording medium.

Claims 1 and 8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner correctly interpreted the claims as being directed to an apparatus. In response, claims 1 and 8 have been replaced with new claims 12 and 13 and the following explanation is provided.

The preamble of new claim 12 is described from page 8, line 20 to page 9, line 6 of the original specification, and illustrated in Figure 1. Figure 1 shows a condition where basic-administrative-tasks program, recorded in a computer-readable recording medium 10, are loaded onto a computer system 100. The preamble of new claim 12, clarifies that a computer-readable recording medium of this invention includes (1) a plurality of basic-administrative-tasks programs, and (2) a data-writing processing module, in which (a) a DLL file that stores a data-writing processing function group, and (b) a procedure program file of a primary

dump file creating means are recorded.

Paragraph (a) of new claim 12 is described in page 4, lines 12 to 24 and page 11, lines 7 to 11 of the original specification.

Paragraph (a) of new claim 12 is described in page 4, lines 4 to 12, as well as from page 10, line 21 to page 11, line 1 of the original specification.

Paragraph (a) of new claim 12 clarifies that a data-writing processing function group is (a) classified - according to two kinds of conditions - into respective tables for data-writing process, and then (b) stored in the DLL file.

Paragraph (1) of new claim 12 is described from page 10, line 21 to page 11, line 6 of the original specification. Paragraph (a) of new claim 12 is described in page 11, lines 7 to 11 of the original specification.

New claim 12 clarifies that, when data-writing process is performed for each table of a database from one of the basic-administrative-tasks programs installed in a terminal computer, (1) a data-writing processing function is from a DLL file in the basic-administrative-tasks program, (2) a writing application program that writes the data to each table is created, and that (3) the application program is executed by the terminal computer, so that the data of the basic-tasks program are written.

Original claims 8 and 9 are combined into amended claim 8 to specify and clarify the contents of "data-accepting process" and "a data-accepting processing module."

Claims 1 and 8 are further rejected under 35 U.S.C. § 112, second paragraph, because the Examiner is unclear on the phrases "writing/processing", "write-processings", "relational-database-storage/processing", a "data-accepting/processing." These expressions are as follows:

Original	After Amendment
data writing/processing	data-writing processing
data-accepting/processing	data-accepting processing
database-storage/processing	database-storage processing

As mentioned above, a slash (/) is deleted from the term, "data-accepting/processing," in the original specification, and the term, "data-accepting processing," is used to clarify the meaning.

As for the Examiner's question regarding page 23, lines 8 to 11 of the original

specification, "the application is generated by the module."

The application program is generated using a data-accepting processing function group of the data-accepting processing module in a terminal computer. It is further clarified that the application program is operated in a terminal computer, and that the external general-purpose text data being set is accepted, and sequentially written onto each table of a writing target database.

In view of new claims 12 and 13, these rejections should be withdrawn.

Claims 6, 7, 10 and 11 are rejected under 35 U.S.C. § 112, second paragraph, as being incomplete. In response, these claims have been cancelled and this rejection is now moot.

Claims 1-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by the Navision Software. In response, claims 12 and 13, which correspond to rejected claim 1 and 8 have been amended and the claims are believed patentable over the applied reference for the reasons discussed below.

Claim 12 includes the recitations of: "(1) at least the basic-tasks programs and the data-writing processing module in the recording medium are recorded; and (2) the data-writing processing module (a) stores a data-writing processing function group, and (b) is equipped with at least a DLL file and a program file of a primary dump file creating means."

On the other hand, "Consistent Data" in the cited example, Navision program, describes as follows.

At the time of data-writing process in a database, it is a programming means where the entered data are written in a writing target table, after the entered data are recognized as correct.

Differences between this invention and the applied reference are as follows:

As recited in claim 12, when one of the basic-tasks programs is set up, "a primary dump file" of this invention automatically creates a default dump file containing all the information relating to the basic-tasks programs. Since the file is primarily set to a given path under a given filename, the DLL file can be called up from a terminal computer of a user, so that an application program for automatic writing can be generated.

On the other hand, the applied reference dose not have or describe the idea of the above-mentioned "primary dump file." In the applied reference, data that are not entered from the terminal are once written in another posting and checked, and then the data are written in a database. Therefore, it is natural that the cited example has no description that corresponds to "a

primary dump file" of this invention.

Applicants contend that the cited reference does not teach a primary dump file as recited in claim 12. A dynamic link library (DLL) is used in an operating system (OS) that is operated in a personal computer terminal, etc. In Microsoft Windows®, DLL has a file name with an extension defined as ".DLL." This is a publicized technique to dynamically link to a library function and utilize a function -- provided by the DLL file -- in an application, by calling up a DLL file during execution of an application. The Navision reference does not mention any idea or description of a primary dump file. The applied reference merely describes a general data-writing processing program that is used in a commercially available, general-purpose OS.

As recited in new claim 13 in paragraph (2), regarding the expressions, "columns or new tables are added to a database" and "Fully Integrated Development", the applied reference describes a means for entering data into a database, in which tables are customized by adding columns, etc.

On the other hand, according to new claim 13, if the recording medium is installed to a computer system, a data-writing processing function group stored in a DLL file becomes usable, and when basic-tasks programs for processing are set up, a given path can be automatically accessed from a terminal computer under a given database name. A writing target of the path is entered into arguments of the data-writing processing function group, so that a batch processing type of an application program -- that comprises each data-writing processing function of each table -- can be generated. This is not found at all in the applied reference.

According to the above comparison, it is not believed that "Fully Integrated Development" and "Design and modifications" in the applied reference discloses, teaches or suggests the concept of claim 12.

The Examiner states that Navision discloses "a program having a relational database". The above-mentioned program is not included in a recording medium of this invention. Figure 1 of this application shows one embodiment of a computer system that can be operated by a terminal computer, wherein various programs recorded in the recording medium are installed and operated, respectively. In Figure 1, a program having a relational database is loaded in a server computer 6 in such a computer system, and illustrated as a program 61 for controlling a database device 4.

According to this invention, in addition to such basic-administrative-tasks programs, a

computer-readable recording medium further comprises (1) a data-writing processing module equipped with at least (a) a DLL file storing a data-writing processing function group and (b) a program of a primary dump file creating means, and (2) a data-accepting processing module equipped with at least (c) a DLL file storing a data-accepting function group. Accordingly, for at least these reasons, the anticipation rejection of claims 12 and 13 should be withdrawn. The dependent claims recite additional, important limitations and should be allowable for the reasons discussed with respect to the independent claims as well as on their own merits.

Claims 6, 7, 10 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Navision brochure. In response, claims 5, 7, 10 and 11 have been cancelled. Therefore, this rejection is moot and should be withdrawn.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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~~A Basic Administrative Tasks Software Program and a Method of Selling Same~~

A Computer-readable recording medium in which basic-administrative-tasks software programs are recorded

BACKGROUND OF THE INVENTION

Field of the Invention

~~This invention relates to a software program for performing a company's (hereinafter sometimes "user company") basic administrative tasks (hereinafter "basic tasks" or "tasks"), and a method of selling such a program, which comprises a primary software program that performs such tasks and that includes a set of databases for maintaining data relating to those tasks, with said programs to be sold by a plurality of retailers and to be purchased by user-companies that can immediately use the program after installing it in a computer.~~ This invention relates to a computer-readable recording medium in which basic-administrative-tasks software programs are recorded, and said program which can be immediately used after they are installed in terminals of a computer system equipped with a database for processing company's basic-administrative-tasks and a plurality of terminals which can load a task processing software program.

Description of the Prior Art

There are certain common basic administrative tasks that must be performed by all companies, even though the ~~columns~~ types of business of the companies differ. Such basic tasks include, for example: accounting tasks relating to income and expenditures, such as costs associated with doing business; sales/purchases-related

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tasks for recording and managing data concerning the sales of the company's products or services, customers to which merchandise or services are provided, and purchase orders to suppliers from which materials or services are obtained; and worktime/wages-related tasks involved in managing wage calculations and payments

5   to the company's employees.

The aforementioned basic tasks of companies have enormously high commonality with regard to the items to be recorded and managed by each company, as well as to the methods of processing such items, even though the business styles or business fields of the companies differ. Such basic tasks account for most of the

10   processing work of a company, and they are performed every day, week after week and month after month. Therefore, such basic tasks are especially suitable for the mass-processing, precision, and speediness that is possible by using computers.

The present ~~basic-tasks program~~ basic-administrative-tasks software programs (basic-tasks programs) comprises a graphical user interface (GUI) and a

15   relational-database management system that has a high-speed searching/sorting function for keeping up with the progress of a personal computer and the computer's operating system. The subject program also is capable of being used with a network, which is the usual circumstance when a company's resource data is being prepared.

Because the ~~basic-tasks program~~ basic-administrative-tasks software

20   programs are ~~is~~ developed by a software company whose personnel who are professionals in such fields as financial accounting, wage calculation, sales/purchases management, and systems engineering, it is designed to be ideal for processing a user-company's basic tasks. Use of such an ideal task-management program can improve the management of companies, particularly small and

25   medium-size companies, which often experience difficulty in securing personnel, and venture companies that are involved in starting up new businesses.

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However, prior ~~basic-tasks programs~~ <u>basic-administrative-tasks software</u>

<u>programs</u> have had problems in that they could not cover either special management

items that correspond to specific business fields or management items and methods

for realizing a novel tasks-management means based on management concepts that

5   differ among companies. Therefore, the utilization of ~~basic-tasks programs~~

<u>basic-administrative-tasks software programs</u> has been limited to companies having

a history of applying their own management systems. In order to develop the

application programs into which such a company's unique management system can

be integrated, a large amount of money and period have been required, because

10   development steps such as analysis of the existing system, design of a new overall

system, detailed design of a database and processing procedures, programming, and

testing and debugging have been needed. Also, small and medium-size companies

have had additional difficulties in that a longer period of development and higher

costs were required for such companies, because they had to contract out the

15   development work to outside software-developing companies, inasmuch as such

companies could not secure professionals such as system engineers and

programmers, and hence the development work could not be done within the

company.

To solve the above-mentioned problems, it is necessary for ~~a basic-tasks~~

20   ~~program~~ <u>basic-administrative-tasks software programs</u> to serve as ~~a~~ basic programs

that can perform a company's basic administrative tasks in order to achieve their

intended effects, but also for the program to be such that there can be developed and

operated a separate application program for processing additional data in a way that

is compatible with the processing of the company's data by the ~~basic-tasks program~~

25   <u>basic-administrative-tasks software programs</u>.

However, because the basic database and other features of the prior

~~basic-tasks programs~~ <u>basic-administrative-tasks software programs</u> could not be

customized to be compatible with the application programs that were developed by companies to handle their unique requirements, the use and value of such ~~basic-tasks programs~~ basic-administrative-tasks software programs were severely limited.

5 ~~PROBLEMS TO BE SOLVED BY THE INVENTION~~ Summary of the Invention

This invention has been created in view of the above-mentioned problems. Its objectives are to provide ~~a customizable basic-tasks programs~~ a computer-readable recording medium in which customizable basic-administrative-tasks software programs are recorded, the customization rules of which are publicized, and to

10 enable sales of ~~such programs~~ the above-mentioned computer-readable recording medium to companies and distribution of the customized application in the market.

~~MEANS OF SOLVING THE PROBLEMS~~

For the purpose of solving ~~said~~ the above-mentioned problems, the present

15 invention provides:

a computer-readable recording medium, in which plural basic-administrative-tasks software programs that are installed and operated in plural terminals of a computer system are recorded, and this computer system comprises at least plural terminals for processing basic-administrative-tasks, and a database

20 device that stores company's resource data required for the tasks and is controlled by a database server computer, and said recording medium is characterized such that

said computer-readable recording medium further comprises, in addition to a plurality of said basic-administrative-tasks software programs, a data-writing processing module that records

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a Dynamic Link Library (DLL) file, which stores a data-writing processing function group that corresponds to each table in order to create a database writing application program that can correspond to either of the customized or noncustomized conditions according to each table unit of basic-tasks programs at the

5   time of entering data into the table of a database by data-entry processing with the basic-tasks programs that are installed in said terminal computers, and

a program file of a means for creating a primary dump file, in which a current table is automatically created when the basic-tasks programs are set up in order to create a new table that can perform customization by adding columns to an original

10   table;

the means for creating a primary dump file automatically creates a default dump file including all of information on database relating to the tasks under a given filename in a given path of said server computer when said basic-tasks programs are set up in one of said terminal computers , and a new table for writing customized

15   data is created by the created default dump file;

said data-writing processing function group divides tables into at least two conditions: the first condition being whether to or not to be custom written, and the second condition being whether the data being entered is new data, a revision of previously entered data, or a deletion of previously entered data, at the time of

20   writing processing of said basic-tasks programs executed in each table, and is stored in the DLL file for each possible combination of the two conditions;

the function groups have respective arguments in which at least a target database name, data to be entered, a serial number, and an identification number are entered, and items for inputting the additional data and the style formats are formed

25   to the arguments of the customized functions, and when a function corresponding to each table is called up and a required task processing data is set to the arguments as

entry items, data is written to a target table in the arguments by the function;

if programs recorded in said computer-readable recording medium are installed to said terminal computer and a basic-tasks program desired to perform data-writing processing is set up, a default dump file is generated as an original table in a given path under a given filename;

when custom-writing is desired, customization is performed by creating a new table for writing customized data in another memory region different from that of the original table, and adding columns to the original table against the new table;

the data-writing processing function corresponding to said division is called up for each table of the basic-tasks program from the data-writing processing function group of said DLL file;

a data-writing processing application program is generated that can write sequential data for each table unit by batch processing, using a series of data-writing processing functions, to the arguments of which required basic-tasks processing data is entered respectively; and

the data-writing processing application program is operated by said terminal computer, and when the original column of each table and the customized table are used, the data of the customized columns are sequentially written for each table, and the basic-tasks programs are batch processed.

~~the basic-tasks program of the present invention consists of~~

~~a module for writing data to tables in order to generate an application program that can process data under both customized and noncustomized conditions contained in a particular data table of a task program, when data is entered into the tables of a database from a computer terminal, with said module for writing data~~

~~being equipped with a primary means for automatically creating, in a given path of a~~
~~server computer, a default dump file, under a given filename, that includes all of the~~
~~information to be contained in the database associated with the tasks, when said task~~
~~program is launched, and~~

5 ~~a (DLL) Dynamic Link Library file for dividing the data entry for each task~~
~~of said task program into two conditions, the first condition being whether the data is~~
~~to be or not to be customized, and the second condition being whether the various~~
~~data, including data concerning a task-related slip and detailed data regarding the~~
~~task relating to the slip, involves an entry of new data or a revision or deletion of~~
10 ~~existing data, and for storing a data writing/processing functions group for each~~
~~combination of the two conditions, with the default dump file being created under a~~
~~given filename in a given path from said terminal by said primary dump-file-creating~~
~~means, and with columns being added to an original table comprising the default~~
~~dump file, or with new tables being created if custom writing is desired, and the~~
15 ~~function is called up for each table of said various data writing processings so as to~~
~~create an application program, whereby said database is modified by said data~~
~~processing.~~

~~Furthermore, said data writing/processing functions groups have arguments~~
~~in which at least a target database name, data to be entered, a serial number, and an~~
20 ~~identification number are entered, and the customized writing functions have~~
~~arguments consisting of the additional data and the additional style formats for~~
~~inputting the additional information.~~

Plural terminals are provided, and said module for writing data for
maintaining the matching of data in the simultaneously executed entries includes a
25 simultaneous-executions control program for performing exclusive control of each
execution unit.

Said basic tasks includes at least any one of the following: accounting tasks, sales/purchases-related tasks, and worktime/wages-related tasks.

The company's resource data that is stored in said group of databases comprises a group of master tables and a group of data tables required for executing
5   at least any of three administrative tasks: accounting tasks, sales/purchases-management tasks, and worktime/wages-related tasks. Said group of master tables comprises at least any of the following tables for a company's basic list of master files: a master list of account titles, a master list of customers, a master list of merchandise, and a master list of personnel, and said data-table group comprises
10   at least tables for a variety of slip data, such as data from accounting-journal slips, sales slips, and purchase slips.

~~With the method for selling the basic tasks package or/and a module for~~ ~~writing data as described in Claim 1, 2, 3, 4, or 5, a~~ <u>A</u> retailer adds columns or new tables to original tables if a user-company uses a computer system and requests
15   customization of the tasks-related databases, accesses the ~~data writing/processing~~ <u>data-writing processing</u> function corresponding to the customized conditions, including conditions as to whether new data is being entered, previously entered data is being revised, or previously entered data is being deleted from said ~~data~~ ~~writing/processing~~ <u>data-writing processing</u> functions group on the basis of the
20   specific task of said various data entry/processing operations, enters the name of a writing-target database, the basic data to be entered, a serial number, an identification number, additional data, and a style format for the additional data in terms of the arguments of the selected function, and generates an application program for writing, by batch processing, to the database according to the table unit.
25   The application program is sold by a plurality of retailers as an attachment to the basic-tasks program.

With the method for selling the basic-tasks program or a module for writing data as described in Claim 6, a user-company or its retailer collects information relating to applications developed by performing customization, stores that information in a database, and publicizes that information on the software

5   company's Website. Such information can be accessed from said database when another user-company wants to perform similar customization.

A computer-readable recording medium recorded basic-administrative-tasks software programs, is characterized such that said recording medium is equipped with, in addition to a plurality of said basic-tasks programs and data-writing

10   processing module, a data-accepting processing module, which stores a data-accepting processing function group corresponding to each table in a DLL file, in order to generate a database writing application program that compatibly operates with both customized and nondustomized conditions according to the table unit of the basic-tasks programs when a general-purpose data, namely a text data is read in

15   the table of the database from the outside of said terminal computer with the basic-tasks programs that are installed to said terminal computer and the general-purpose data is accepted in the table of said database;

said data-accepting processing function group is divided and entered in the DLL file according to whether each table for writing a text file of the external

20   general-purpose data has at least additional customized columns or not, when the data is accepted from the outside of the said basic-tasks programs for each table unit;

each function group has arguments, which have at least a target database name, a full path to a text file of the external general-purpose data, a full path of a log file creating target, a slip number, and an identification number as entry items,

25   and also when columns are added to the data of the text file, a format for entering it is created as an entry item, such an application can be created that writes the data to

a writing target table from the general-purpose text file with the function by batch processing, when the function corresponding to each table of the general-purpose data is called up and the required basic-tasks processing data is set into the entry items of the arguments;

5   to accept said external general-purpose text data in the database, the data is firstly set into a hard-disk drive or a floppy-disk drive of the terminal computer, in which basic-task programs recorded in said computer-readable recording medium are installed;

a data-accepting processing function corresponding to the customized

10   condition of the basic-tasks program is called up for each table from the data-accepting processing function group of said DLL file using the terminal computer;

a data-accepting processing application program that can sequentially accept the data for each table unit is created using a series of the data-accepting processing

15   functions, to the arguments of which required basic-tasks processing data is entered respectively;

the data-accepting processing application program is operated by said terminal computer, the data is sequentially accepted and written via the data-accepting processing function from the hard-disk drive or the floppy-disk drive

20   that records the external general-purpose text data, to which the data of an original column and the data of a customized column of said writing target database are set for each table.

~~In a computer equipped with a basic-tasks program comprising plural task programs for executing company tasks and a relational database storage/processing~~

25   ~~device comprising a database group for storing the company's resource data required~~

for said task programs. Said basic tasks program is equipped with a module for entering data into tables so as to generate an application program that can process data under both customized and noncustomized conditions according to the table unit of said task program when the general purpose data is entered into said database from the terminal of the company's computer system, and said module for entering data is equipped with at least a DLL file for storing a data accepting/processing functions group corresponding to the customized conditions that the data accept processing is custom written or not according to the table of each task program. An application batch program is produced by using said data accepting functions group of said module for entering data that corresponds to the customized condition of each table in the database when said general purpose data text file is processed, and said application batch program is operated so as to sequentially and continuously enter the data into the database.

Said data accepting/processing functions groups have arguments into which are entered at least the name of the target database, the full path to the text file of the general purpose data, the full path of a log file creating target, a slip number, and an identification character, and the format is additionally set as a program when additional columns exist in the data of the text file.

In a method for selling a basic tasks program or a module for entering data described in Claim 8 or 9, a A user-company's retailer selects the data-accepting function corresponding to the customized conditions that apply when a user-company uses a computer system and wants to enter general-purpose data into the database from the terminal, writes at least the name of the target database, the full path to the text file of the general-purpose data, an identification number, and the format of the additional columns at the time of being customized in the arguments of the accepting function. The retailer then creates and tests an application batch program that is then sold at a plurality of retailers as an attachment to the basic-tasks

program.

~~Also, in the method for selling the basic-tasks program or module for entering data described in Claim 10, said~~ Said user-company or its retailer collects the information about the application program that was developed by customization,

5   stores that information in a database, and publicizes that information on the software company's Website. That information can be accessed from said database when another user-company wants to perform a similar customization.

DESCRIPTION OF THE DRAWINGS

10   The present invention is illustrated by way of example, and not by limitation, in the figures of the accompanying drawings, wherein elements having the same reference numeral designations represent like elements throughout and wherein:

FIG. 1 is a block diagram of one embodiment of the present invention, showing a basic-tasks processing device using ~~the basic-tasks program~~

15   basic-administrative-tasks software programs recorded in a computer-readable recording medium[[.]];

FIG. 2 is a flowchart showing data entry requiring customization with a module for writing data of the present invention;

FIG. 3 is a flowchart of general-purpose text-data processing using a module

20   for entering data of the present invention[[.]];

FIG. 4 (1) shows a sales-slip ~~data writing/processing~~ data-writing processing functions group (in the case of a new sales slip to be entered/registered) of the present invention and (2) shows a list of the group's arguments[[.]];

FIG. 5 (1) shows a sales-slip functions group (in a case of data being revised or deleted), (2) shows a list of the group's arguments, (3) shows the sales-slip deletion function and (4) shows a list of the sales-slip functions group's arguments[[.]];

5   FIG. 6 shows one embodiment of sales-slip-head data required for initial entry/registration or revision of sales-slip data[[.]];

FIG. 7 shows one embodiment of sales-slip detailed data required for initial entry/registration or revision of sales-slip data[[.]]; and

FIG. 8 shows one embodiment of an application program for database writing

10   by using the ~~data writing/processing~~ data-writing processing function of the present invention.

~~A DETAILED DESCRIPTION OF THE INVENTION~~

THE DETAILED DESCRIPTION OF THE INVENTION

15   ~~The Embodiment of the Invention~~

FIG. 1 is a block diagram of one embodiment of the present invention, showing a basic-tasks processing device 100 (a computer system of a user-company) ~~that is used to operate the basic-tasks processing program 10~~ that is operated using basic-administrative-tasks software programs in a

20   computer-readable recording medium in which basic-administrative-tasks software programs are recorded 10. FIG. 1 also shows computer terminals 1 and 2, a ~~database storage/processing~~ database-storage processing device 4, a local area network (LAN) 5, and a server computer 6.

Computer terminals 1 and 2 are controlled by a commercial operating system (OS) and ~~are used to operate the basic-tasks processing program 10 after it has been installed in the basic-tasks processing device 100~~ basic-administrative-tasks software programs recorded in the computer-readable recording medium 10 are installed and

5   operated by the operating system, as shown in FIG. 1.

In the embodiment of the present invention, the ~~basic-tasks program~~ recording medium 10 includes at least a sales/purchases-tasks program 11, a financial-accounting-tasks program 12, and a worktime/wages-related tasks program 13, as well a customizable ~~data-writing/processing~~ data-writing processing software

10   module 20 of a following readable recording medium, in which programs are recorded, that ensures that data being input from a computer terminal 1 will be compatible with the tables of the databases into which the data is being input and that are stored in the ~~database-storage/processing~~ database-storage processing device 4.

15   The ~~data-writing/processing~~ data-writing processing ~~software~~ module 20 comprises ~~data-writing/processing~~ data-writing functions groups 20a which is stored in a DLL file, that corresponds to each of the task programs to be operated under either customized or noncustomized conditions; a simultaneous-executions limiting means 20b, for maintaining compatibility in the case of simultaneous executions by

20   each table unit; and a primary dump-file-creating means 20c that, at the time of starting up of a task program, automatically creates, under a given filename, a default dump file that will include all of the information contained in the database related to the task in a given path of the server computer.

In addition to the computer terminal 1, there is a computer terminal 2 that is

25   equipped with a ~~data-accepting/processing~~ data-accepting processing module 30 for accepting general-purpose data (text data).

The ~~data-accepting/processing~~ data-accepting processing module 30 is equipped with at least a ~~data-accepting/processing~~ data-accepting processing functions group 30a corresponding to both the customized and noncustomized conditions, depending on the particular table unit.

5   A hard-disk drive or floppy-disk drive reads general-purpose data, namely text data, that is being input, and the data is stored on applicable hard disk or floppy disk 1a.

A database group in the ~~database storage/processing~~ database-storage processing device 4 is controlled by a database-device control program 61 in the

10   database server computer 6.

In such a case, tables 41a, 41b, and so on are contained in a sales/purchases database 41; tables 42a, 42b, and so on are contained in an accounting database 42; and tables 43a, 43b, and so on are in a worktime/wages-related database 43.

There also can be provided other task-management database groups in

15   addition to the task-management databases 41, 42, and 43. In such a case, a ~~data writing/processing~~ data-writing processing function that is appropriate for the additional tasks program(s) is added to the ~~data writing/processing~~ data-writing processing functions group 20a.

Next, the operation of ~~the basic tasks program 10~~ the computer-readable

20   recording medium in which basic-administrative-tasks software programs are recorded 10, of the present invention using the basic-tasks processing device 100 will be described, based on the flowchart in FIG. 2.

Referring now to FIG. 2, first ~~First~~ will be described the data-entry process using a computer terminal 1 or 2 in a case where the computer-readable recording

25   medium in which basic-administrative-tasks software programs are recorded 10, is

equipped with the ~~data writing/processing~~ data-writing processing ~~software~~ module 20.

The tasks program 11, 12, 13 ~~(12) (13)~~ for performing a company's basic tasks that are to be executed is launched at step 21 ~~(S21)~~. At that time, the primary dump-file creating means 20c of the ~~data writing/processing~~ data-writing processing ~~software~~ module 20a creates, under a given filename, a default dump file in a given path of the ~~database storage/processing~~ database-storage processing device 4 in the server computer 6 at step 22.

Then, at step S23 the table 41a, 42a, 43a ~~(42a) (43a)~~ of a database comprising the default dump file is ~~used~~ generated as an original table in a core memory region, and the table 41b, 42b, 43b ~~(42b) (43b)~~ of a database V for writing customized data is generated in an region other than a memory region. Also, customization is performed by adding columns ~~to the original table in the core hard disk~~ for customized-writing to the table for writing, when customization is processed in the table 41b (42b) (43b) for writing ~~(S23)~~.

At step S24 in ~~In~~ the tasks program 11, 12, 13 ~~(12) (13)~~, the ~~data writing/processing~~ data-writing processing functions group that corresponds to the customized or noncustomized conditions, along with any condition(s) relating to the entry of new data or to the revision or deletion of existing data, are accessed by each ~~file~~ table from the ~~data writing/processing~~ data-writing processing functions group 20a in a DLL file of the ~~data writing/processing~~ data-writing processing ~~software~~ module 20 ~~(S24)~~.

At step S25 ~~Next~~, the name of the target database, an entry-data serial number, an identification number, additional-columns data, the style format of the additional-columns data, and the like are input in arguments of the ~~data writing/processing~~ data-writing processing functions group 20a, and an application

program for batch processing the writing of each table is created (S25).

At step S26 the The application program is operated from the computer terminal 1, 2 (2), and data is sequentially entered in the original-columns data and the additional-columns data of each table, or in a new table 41b (42b) (43b) in the

5   database (S26).

Furthermore, for the purpose of maintaining the compatibility of the data entered simultaneously from plural terminals, the data writing/processing data-writing processing software module 20 includes a simultaneous-executions control means 20b (simultaneous-executions control program) for performing

10   exclusive control of each execution unit.

Said database Database groups 41, 42, 43, and so on are divided into a group of master tables and a data-table group. The group of master tables comprises at least tables for a company's basic list of master files, a master list of account titles, a master list of customers, a master list of merchandise, and a master list of

15   personnel, a master list of management personnel, and the like. The data-table group comprises tables of information relating to various slips such as journal vouchers, sales slips, purchase slips, price quotes, contracts, and purchase orders for product-component materials.

Also, a the tasks program 11 relating to sales/purchases tasks processes a

20   variety of slips relating to sales, orders received, payments for orders, purchases, orders placed, payment for purchases, production, transfers from warehouses for deliveries, and so on. The slip data comprises a head part and a details part, such that data conditions can be customized or not customized in four ways: (1) both the head part and the details are customized; (2) only the head part is customized; (3) only the

25   details part is customized; and (4) neither the head part nor the details part is customized. A corresponding data writing/processing data-writing processing

functions group 20a is created for each of these four alternatives.

Because the ~~data writing/processing~~ <u>data-writing processing</u> functions group 20a is installed in a DLL file, the use of the application produced by using that file prevents unnecessary operations, thereby increasing the speed of data

5   entry/processing.

Next, a detailed embodiment of the ~~data writing/processing~~ <u>data-writing processing</u> functions group 20a as shown in FIG. 4 will be described.

FIG. 4 and FIG. 5 show embodiments of the ~~data writing/processing~~ <u>data-writing processing</u> functions group 20a relating to the aforementioned sales

10   slips in the sales/purchases-tasks program 11.

FIG. 4 shows a new-sales-slip registering-functions group (a) in the sales-slip-writing functions group 20a in a case of new registration into the database 41.

As described above, because the sales slip is divided into a head part and a

15   details part, it includes a functions group that consists of the four categories of customized/noncustomized conditions. Each argument is different, corresponding to the condition. In addition, separate functions groups are provided for relay slips, which relay data from received-order slips to sales slips, and for a sales slip other than a normal slip, such as a consumer-tax slip in the case of a sale that is subject to

20   a consumption tax or sales tax.

FIG. 5 shows a sales-slip revision-registering functions group (b) and a sales-slip-deleting functions group (c).

FIG. 6 shows slip-head data (A) and (that are B) required for the registration of a new sales slip and for revision of an already registered sales slip. The data is

designed to be designated in an argument (3), as shown in the Factor List on FIG. 4 (2).

The slip-head data (A) in FIG. 6 is entered only at the time of registering a new sales slip. A system number, a slip number, and other data become

5   identification characters for determining into which tables the data, including customized data, is to be entered.

FIG. 7 shows a sales-slip's detailed data (C) that is designed to be assigned to the slip-head data of FIG. 6, which is designated in Factor (7).

The detailed data (C) is entered in a form that is to be repeated in each line of

10   detailed data.

FIG. 8 shows how an application program for database writing is produced using the above writing functions.

In this embodiment, "DO4_ERP_Wrt1" is used for the writing function, and columns are added to both the head and details parts of the sales slip, and a normal

15   slip is used in the new-sales-slip registering function.

Therefore, the arguments are input into all (1-10) arguments of the list of arguments. Also shown in FIG. 8 is a structure for storing data relating to an additional style of the arguments (5) and (9) and a structure for storing information after the data has been designated in the argument (10).

20   Next, a method of selling said <u>computer-readable recording medium in which</u> <u>basic-tasks programs are recorded 10 using the</u> ~~or said data writing/processing~~ <u>data-writing processing</u> ~~software~~ module 20a will be described.

With this method, when a user-company uses a computer system and requires customization in order to add tables or columns of tables to a database from a

terminal, the ~~said~~ retailer (1) loads a primary dump file while providing a given file name for that dump file, (2) creates both additional tables for customization as a customizing region in a memory region of the database and additional columns in the original table, (3) accesses the ~~data writing/processing~~ data-writing processing function that corresponds to the customized conditions and any of the new, revision, or deletion conditions in data processing from the ~~said data writing/processing~~ data-writing processing functions group by each table of various data entries/processings based on the module, and (4) creates an application program for repeating the entry/processing of the name of a targeted database, a data serial number, an identification number, additional data and the style format thereof to the arguments of the selected ~~data writing/processing~~ data-writing processing function by each table, and for writing the data to the database by batch processing. The application is sold by retailers as an attachment to the computer-readable recording medium in which basic-tasks programs are recorded 10 or the data processing ~~software~~ module 20a.

In addition, the user-company or its retailer collects the information related to the application program that has been developed by customization, stores that information in a database, and publicizes information about that application program on the software company's Website. As a result, there can be constructed a system whereby that information can be accessed from the ~~said~~ database when another user-company wants to customize its software program in a similar way. As a result, the other user-company can reduce its program-development time and also minimize the costs of development.

Next, the operation of general-purpose text ~~data writing/processing~~ data-writing processing will be described, based on FIG. 3.

As described above, the terminal 2 is equipped with a

~~data-accepting/processing~~ <u>data-accepting processing</u> module 30 for entry/processing of general-purpose data, namely text data. The operation of ~~data-writing/processing~~ <u>data-writing processing</u> will be described below.

First, the task program 11 (12) (13) is installed in the terminal 2 (S31). Next, a default dump file is created under a given filename in a given path of the ~~database storage/processing~~ <u>database-storage processing</u> device 4 in the server computer 6 by the primary dump-file creating means 20c of the ~~data writing/processing~~ <u>of data-writing processing</u> ~~software~~ module 20 (S32).

Next, the table 41a (42a) (43a) in the database comprising the default dump file is ~~used~~ <u>generated</u> as an original table in a core <u>memory</u> region, and a ~~data writing/processing~~ <u>data-writing processing</u> table 41b (42b) (43b) <u>the database V</u> into which customized data has been written is generated in an region other than its <u>core</u> memory region. Also, customization is performed by adding columns ~~to the original table in the core region~~ <u>for customized writing to the table for writing when customization is performed in the table 41b (42b) (42c) for writing</u> (S33).

The general-purpose text data that is desired to be entered into the database is entered by the hard-disk drive or floppy-disk drive onto the applicable hard disk or floppy disk 1a (S 34).

A ~~data-accepting/processing~~ <u>data-accepting processing</u> function corresponding to the customized condition(s) in the tasks program 11 (12) (13) is accessed from the ~~data-accepting/processing~~ <u>data-accepting processing</u> functions group 30a of the DLL file of the ~~data-accepting/processing~~ <u>data-accepting processing</u> module 30 on a file-by-file basis (S35).

<u>In step S36, the</u> ~~The~~ name of the target database, the full path of the text data (which, in this embodiment, is entered on the hard-disk drive or floppy-disk drive

1a), the style format of the additional columns, and other data are input into the arguments of the ~~data-accepting/processing~~ data-accepting processing function group 30a on a file-by-file basis, so as to create a database-writing application program ~~(S36)~~.

5   In step S37 the ~~The~~ application program is operated from the computer terminal 2 and performs batch processing whereby the text data is written to the database ~~(S37)~~.

As described above, because the ~~data-accepting/processing~~ data-accepting processing function group 30a corresponding to the customized condition is selected

10   and used in advance of the batch processing, the above-mentioned batch processing can be effectively performed and the data-entry operation can be performed at a high speed.

Next, there will be described a method for selling ~~the aforementioned~~ ~~customized batch processing application program as an attachment to said~~

15   ~~basic tasks program 10~~ the aforementioned computer-readable recording medium in which basic-administrative-tasks software programs are recorded 10, or the data-accepting ~~software~~ module 30.

With this method, when a user-company uses a computer system and wants to enter general-purpose data into the database from a terminal, the retailer selects

20   the accepting function that corresponds to the customized condition from an accepting-functions group of said data-accepting ~~software~~ module 30, creates a batch-processing application program by entering at least the name of the target database and the format of the additional columns when data is being customized, and then tests that application program, which is later is sold via retailers as an

25   attachment to the computer-readable recording medium in which basic task programs are recorded, or the ~~data-writing/processing~~ data-writing processing

module.

Also, information relating to the application developed as described above is collected and stored in a database, and information regarding the content of that database is publicized on the software company's Website. As a result, there can be created a system whereby another user-company can use the information by accessing it from the database when that company wants to customize the application.

~~Effects of the Invention~~

The present invention's ~~basic-tasks software program and the method of selling the program~~ computer-readable recording medium in which basic-administrative-tasks software programs are recorded, has ~~have~~ the following effects.

1. The ~~basic-tasks program~~ basic-administrative-tasks software programs are ~~is~~ equipped with a module for writing data that enables data to be entered into a database, and the basic-tasks program can easily customize database tables while maintaining compatibility between the tables. In addition, the ~~data writing/processing~~ data-writing processing can be performed at high velocity.

2. The ~~basic-tasks program~~ basic-administrative-tasks software programs can also easily batch process the externally generated general-purpose text data that is entered by the ~~data writing/processing~~ data-accepting processing module, and the basic-tasks program also can easily be customized.

3. A ~~data writing/processing~~ data-writing processing function corresponding to each task program and the customized condition(s) thereof is created for the ~~data writing/processing~~ data-writing processing module, and, as a result, ~~data writing/processing~~ data-writing processing can be efficiently performed.

23/27

4. A ~~data-accepting/processing~~ data-accepting processing function corresponding to each task program and the customized condition(s) thereof is also prepared for the ~~data-writing/processing~~ data-accepting processing, and, as a result, ~~data-accepting/processing~~ data-accepting processing can be effectively performed.

5. 5. When a ~~data-writing/processing~~ data-writing processing module or a basic-tasks program for such a module is sold, the retailer creates an application program that meets the user-company's request and that corresponds to the unique customization that is required for the user-company. The retailer can sell that application program as an attachment to the module for writing data or basic-tasks

10 program. This is an effective selling method for the retailer.

6. Similar to Effect 5, when a ~~data-accepting/processing~~ data-accepting processing module is sold, because the retailer can create an application program that meets the user-company's request or desire and that corresponds to the unique customization that is required for the company and can sell that application program

15 as an attachment to the ~~data-writing/processing~~ data-writing processing module, this is an effective selling method for the retailer.

7. Also, if the information relating to customized applications is collected and stored in a database, and if a list of various customized applications is publicized on the software company's Website, another

20 company that uses that type of information can minimize the development time and costs involved in creating a similar customized application program.

EXPLANATION OF NUMBERS IN DRAWINGS

1, 2   computer terminals

1a   hard-disk or floppy-disk

5   4   ~~database-storage/processing~~ database-storage processing device

5   local area network (LAN)

6   server computer

10   ~~basic-adminsiatrative-tasks-processing-program~~ computer-readable recording medium in which basic-administrative-tasks software programs are recorded

10   11   sales/purchases-tasks program

12   financial accounting-tasks program

13   worktime/wages-related tasks program

20   ~~data-writing/processing~~ data-writing processing module

20a   ~~data-writing/processing~~ data-writing processing functions group

15   20b   simultaneous-executions limiting means

20c   primary dump-file creating means

30   ~~data-accepting/processing~~ data-accepting processing module

30a   ~~data-accepting/processing~~ data-accepting processing functions group

41   sales/purchases-management database

41a, 41b, and so on   tables

42   financial-accounting database

42a, 42b, and so on   tables

43   worktime/wages-related database

5   43a, 43b, and so on   tables

61   database-device control program

100   computer system (basic-tasks processing device)

It will be readily seen by one of ordinary skill in the art that the present invention fulfills all of the objects set forth above. After reading the foregoing

10   specification, one of ordinary skill will be able to affect various changes, substitutions of equivalents and various other aspects of the invention as broadly disclosed herein. It is therefore intended that the protection granted hereon be limited only by the definition contained in the appended claims and equivalents thereof.

ABSTRACT

~~To provide~~ A computer-readable recording medium in which basic-administrative-tasks software programs are recorded, according to this invention provides a module for ~~data writing/processing~~ data-writing processing into a database in a manner so as to maintain compatibility of data between tables, even when customized data is included in a table. The module for writing data is equipped with both a ~~data writing/processing~~ data-writing processing functions group corresponding to the customization, and a writing means for simultaneously updating both a customizing region and a core region in the database memory on a disk.